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The Moderating Effect of Cloud Computing Model on the Relationship between IT Governance Mechanism and Business Value

TREO Talk Paper

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Abstract

IT governance mechanism (ITGM) generally increases the benefit and reduces the cost and risks of IT investment, thus enables business value (BV) derived from IT (Tiwana and Konsynski, 2010). However, IT investment characteristics shape the relationship between ITGM and BV. Prior studies (Ali and Green, 2012) state: 1) the relationship between ITGM and BV is stronger when there are higher levels of IT specificity such as IT knowledge to implement and maintain IT services, IT competency, and IT budget, and 2) the lower levels of IT specificity do not necessarily lead to BV without the effective ITGM.

The most crucial reason why IT investment characteristics affect the relationship between ITGM and BV is that the risks vary based on the nature and magnitude of IT investment. For instance, when access to IT is inexpensive and does not need high-tech skills to implement, operate, maintenance, and/or use, business units can buy and use IT without alerting or seeking help from the IT department and/or top management. However, this situation might result in IT security and privacy issues such as confidentiality, reliability, availability, and integration issues in firms with less mature ITGM. If such investments lead to security and/or privacy issues (e.g., cyberattack), the firm is forced to incur the cost to fix the issues or, in the worst case, abandon the invested IT. In such a case, the firm wastes or loses money by investing in that specific technology. Such risks are lower while investing in expensive IT that necessitates a high-tech skill set to implement it because the business unit needs IT units assistance.

Cloud computing (CC) investment provides several opportunities and benefits for the firm, but it may also put the firm at risk. CC investment may expose several risks such as low control of IT expenses, increasing hidden costs, limited customization and integration issues, decreasing the ability of competitiveness, critical security and privacy issue for some confidential and sensitive data, regulation issues, data loss, and date lock-in. However, the levels of risk are different for the three CC service model types, i.e., IaaS, PaaS, and SaaS. The risks related to CC investment may be higher using SaaS than when using PaaS and IaaS. SaaS is less expensive than PaaS and IaaS and needs less technical skills than PaaS and IaaS to implement. In other words, deploying PaaS or IaaS needs specific IT skills and a higher budget compared with SaaS. Thus, the risks related to CC investment may be higher using SaaS than PaaS and IaaS. Because of the different levels of risk and costs associated with each CC model, the BV derived from CC investment depends on the maturity of the ITGM within a firm. Therefore, this study aims to empirically test how the CC models moderates the relationship between ITGM and BV derived from CC investment.

References

- ALI, S. & GREEN, P. 2012. Effective information technology (IT) governance mechanisms: An IT outsourcing perspective. *Information Systems Frontiers*, 14, 179-193.
- TIWANA, A. & KONSYNISKI, B. 2010. Complementarities between organizational IT architecture and governance structure. *Information Systems Research*, 21, 288-304.